

THE UNIVERSITY OF RHODE ISLAND COOPERATIVE EXTENSION

GrowSmartRI

USDA

EPA United States Environmental Protection Agency

Managing Your Small Water System for the Future

OUR SCHEDULE

- Welcome and Introductions
- Workshop Objectives
- Key Management Areas
- Discussion: Other Important Management Areas for Sustainability
- Self Assessment Exercises
 - Capacity Checklist
 - Rating & Ranking

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OUR SCHEDULE

- Working Lunch
- Improving Outcomes
- Practices, Tools, and Measures
- Feedback Session
- Discuss Follow-up Visits and Progress Review

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WORKSHOP OBJECTIVES

- Detail the key utility management areas
- Perform a self assessment process
- Detail tools, tips, and measures for performance improvement



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WORKSHOP OBJECTIVES

- Students perform the self assessment process at their utilities and develop and implement an improvement plan with all key players



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OVERVIEW OF KEY MANAGEMENT AREAS



COMMON CHALLENGES FOR UTILITY MANAGERS

- Aging infrastructure
- Rate issues
 - Prioritize demands for utility expenditures
 - Long-term rate adequacy strategy
- Customer satisfaction and confidence with services and rates



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COMMON CHALLENGES FOR UTILITY MANAGERS

- Operational issues
 - Labor and material costs
 - Regulatory compliance and new requirements
- Workforce complexities
 - Attracting and keeping reliable and competent staff
 - Succession planning
- Knowledgeable and engaged board members



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THE WELL MANAGED UTILITY

- Ten (10) Management Areas framed as outcomes
- Building blocks for utility performance improvement: **where to focus and what to strive for**
- Most water & wastewater utilities pay attention to these areas & likely perform well in at least some of them
- Fit into, draw on, and support **asset management, long-term business planning, and continual improvement management systems**



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THE TEN (10) AREAS

- Product Quality
- Customer Satisfaction
- Infrastructure Stability
- Community Sustainability & Economic Development
- Stakeholder Understanding and Support
- Employee Leadership and Development
- Operational Optimization – Energy and Water Efficiency
- Operational Resiliency
- Water Resource Adequacy
- Financial Viability



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PRODUCT QUALITY

- Clean and safe water
- Produce potable water, treated effluent, and process residuals:
 - Full compliance with regulatory and reliability requirements
 - Consistent with customer, public health, and ecological needs
 - Consistent with local economic development and business needs



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CUSTOMER SATISFACTION

- Know what your customers expect in service, water quality, and rates
- Set goals to meet these expectations
- Help your customers understand the value of water
- Develop a way to gather feedback from your customers, review the feedback, and then act on it



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EMPLOYEE LEADERSHIP AND DEVELOPMENT

- Enable a workforce that is competent, motivated, adaptive, and safe working
- Ensure employee institutional knowledge is retained and improved on over time
- Create opportunities for professional and leadership development



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OPERATIONAL OPTIMIZATION

- Ensure on-going, timely, cost-effective, and reliable performance improvements in all facets of operations (i.e., continual improvement culture)
- Minimize resource use, loss, and impacts from day-to-day operations (e.g., energy and chemical use, water loss)
- Maintain awareness of information and operational technology developments to anticipate and support timely adoption of improvements



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FINANCIAL VIABILITY

- Ensure revenues adequate to recover costs, fund timely maintenance, repair, and replacement of assets, and provide for reserves
- Establish predictable rates, consistent with community expectations and acceptability – discuss rate requirements with customers, board members, and other key stakeholders



FINANCIAL VIABILITY

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INFRASTRUCTURE STABILITY

- Understand **costs** and **condition** for each system component
- Understand operational performance factors (e.g., pressure)
- Plan for system component repair and replacement over the long-term at the lowest possible cost
 - Coordinate asset repair, rehabilitation, and replacement within the community to minimize disruptions and other negative consequences



Liquid Assets The Story of Our Water Infrastructure

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OPERATIONAL RESILIENCY

- Identify threats to the system (legal, financial, non-compliance, environmental, safety, security, and natural disaster) – conduct all hazards vulnerability assessment
- Establish acceptable **risk levels that support** system reliability goals
- Identify how you will manage risks and plan response actions – prepare all-hazards emergency response plan



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COMMUNITY SUSTAINABILITY & ECONOMIC DEVELOPMENT

- Be active in your community
 - Be aware of, or participate in, discussions of community and economic development
 - Get to know local business needs and be aware of opportunities for new residential or business customers
- Align Utility Goals: to be attentive to the impacts utility decisions will have on current and future community and watershed health
- Align Utility Goals: to promote community economic vitality and overall improvement



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WATER RESOURCE ADEQUACY

- Ensure water availability consistent with current and future customer needs:
 - Long-term resource supply demand analysis
 - Conservation
 - Public education
- Understand the system role in water availability
- Manage operations to provide for long-term aquifer and surface water sustainability and replenishment



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STAKEHOLDER UNDERSTANDING AND SUPPORT

- Create understanding and support from oversight bodies, community and watershed interests, and regulatory bodies:
 - Service levels
 - Rate structures
 - Operating budgets
 - Capital improvement programs
 - Risk management decisions
- Actively engage with the community and customers:
 - Understand needs and interests
 - Promote the value of clean and safe water



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SYSTEM IMPROVEMENT PRIORITIES: SELF ASSESSMENT



GETTING STARTED



- Step 1: RATE your system's level of achievement (practice and performance) for each management area
- Step 2: RANK the importance of each area
- Step 3: PLOT the results
- Step 4: IMPROVE by exploring high achievement-related practices



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STEP 1: RATING AREAS

SCALE FROM LOW TO HIGH ACHIEVEMENT

- Select **Low** if your system has no workable practices in place for addressing this area – very low capacity and performance.
- Select **Medium** if your system has some workable practices in place with moderate achievement, but could improve – some capacity in place.
- Select **High** if your system has effective, standardized, and accepted practices in place. It either usually or consistently achieves goals – capacity is high and in need of very little or no further development.



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STEP 2: RANKING AREAS

SCALE FROM LOW TO HIGH PRIORITY

- Current or expected challenges
- Customer or stakeholder impact: reliability; quality; timeliness
- Consequences of not improving: compliance; cost; credibility; health; safety
- Urgency – near or long term need
- Community priorities



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SELF ASSESSMENT DISCUSSION QUESTIONS

- Where is your utility strong? Why?
- Where is there the most room for improvement? Why?
- What are your areas of focus?
 - Why are they a priority?
 - Why is performance low?
 - Technical capacity?
 - Financial capacity?
 - Managerial capacity?
- What are the commonalities and differences among table participants?



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IMPROVING OUTCOMES



Creating a Plan, Taking Action, Measuring Results

TABLE ACTIVITY



- Each table completes an improvement worksheet for one low achievement/high priority management area 
- Share perspectives on **bolded items**:
 - ✓ **What will constitute “high achievement” in this management area?**
 - ✓ **What changes will the utility need to make to improve performance?**
 - ✓ **How could you track your performance progress?**
 - ✓ **What will be the biggest challenges to performance improvement?**

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RESOURCE HIGHLIGHTS

- Three (Typically High Priority) Management Areas
 - Operational Optimization – Water/Energy Efficiency
 - Financial Viability
 - Stakeholder Understanding and Support
- Areas Typically of High Interest to Utility Managers and The Backbone of A Sustainably Managed System



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OPERATIONAL OPTIMIZATION – WATER/ENERGY EFFICIENCY

- EPA: Check Up Program for Small System (CUPSS)
 - Free Asset Management Tool for Small Drinking Water and Wastewater Utilities
 - Tips on How to Develop a Record of Your Assets, an Understanding of Your Financial Situation, and a Tailored Asset Management Plan
- EPA: Energy Use Tool for Water and Wastewater Systems
 - Interactive, Excel-based tool
 - Detailed Analysis of All Energy Types
 - Provides Summary Report: Statement of Energy Performance
- RCAP: Sustainable Infrastructure for Small System Public Services: A Planning and Resource Guide
 - Water Conservation
 - Energy Efficiency
 - Renewable Energy



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FINANCIAL VIABILITY

- NRWA: Revolving Loan Fund
 - Established Under Grant from USDA/RUS
 - Financing for Pre-Development Costs
 - Also Available for Equipment Replacement and Service Extension
- EPA: Setting Small Drinking Water System Rates for a Sustainable Future
 - Determining Revenue Needs
 - Setting Rate Design
 - Approaching Rate Implementation
- RCAP: The Basics of Financial Management for Small-community Utilities
 - Understanding Financial Statements
 - Using Financial Ratios



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STAKEHOLDER UNDERSTANDING AND SUPPORT

- NRWA: Quality on Tap!
 - Nationwide, Grassroots Campaign for Public Awareness
 - Hands On Guide to Engagement and Communication for Better Community Support
- EPA: Talking to Your Decision Makers – A Best Practices Guide
 - Role of Community Decision Makers in Small Systems
 - Tips on How to Communicate Needs to Decision Makers
- RCAP: The Big Guide for Small Systems: A Resource for Board Members
 - Water and Wastewater Treatment Basics
 - Regulatory Responsibilities
 - Board Business
 - Financial Duties and Responsibilities



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TIPS FROM PREVIOUS IMPROVING OUTCOMES EXERCISES

- Key management areas selected and discussed at previous workshops:
 - Stakeholder Understanding and Support
 - Infrastructure Stability
 - Financial Viability
 - Employee and Leadership Development
 - Operational Resiliency



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STAKEHOLDER UNDERSTANDING AND SUPPORT

- High Achievement:
 - Capital improvement plan or other document that summarizes utility priorities and can be shared with utility board
 - Establish standard operating procedures (SOPs) for utility staff that address communication
- Changes Needed:
 - Educate stakeholders about utility needs
 - Create ongoing opportunities for stakeholders and utility to interact (e.g., tours of facility)



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INFRASTRUCTURE STABILITY

- High Achievement:
 - Capital improvement plan
 - Inventory of system components, location, installation date, and condition
 - Understanding of system operating parameters (e.g., pressure, system demands)
- Changes Needed:
 - Making time to support an incremental approach (e.g., maintenance and repair driven)
 - Ability to do smaller projects and upgrades annually



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FINANCIAL VIABILITY

- High Achievement:
 - Funds set aside for reserves
 - Asset management plans, short and long term plans, and quarterly budget reviews
 - Utility board is knowledgeable about financial issues and system maintenance and repairs
- Changes Needed:
 - Good practices in place for rates and shut-offs
 - Better communication between elected officials, utility staff and consumer
 - Independent rate study
 - Document priorities for system improvements



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EMPLOYEE AND LEADERSHIP DEVELOPMENT

- High Achievement:
 - Written job descriptions
 - Clear performance expectations
 - Staff are cross-trained
- Changes Needed:
 - Develop neighboring system relationships for staff to learn from each other
 - Create merit-based initiatives to reward high performance (e.g., additional leave days, recognition, monetary awards)



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OPERATIONAL RESILIENCY

- High Achievement:
 - Emergency response plans, operations plans, shut-off checklists for equipment
 - Drill emergency response plan
 - Certify staff and board members
- Changes Needed:
 - Ensure staff and board know where all emergency documentation is kept
 - Have contractor support lined up in case of emergency



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FOLLOW UP ASSIGNMENTS

- Review the 10 Key Management Areas with all appropriate people (Staff & Stakeholders)
- Perform the “Self Assessment”
- Complete the “Improvements Worksheet”
- **Complete the “System Management Improvement Plan” for three (3) Priority Management Areas**



FOLLOW

WORKSHOP FOLLOW-UP

1. Have you met with other staff from your system and local decision makers to go over the results of the initial assessment you did at the workshop?
 - a) If so, who was involved in those discussions? (operators, board members, other local officials?)
 - b) If not, when do you anticipate doing this?
2. Have you gone on to refine or build on the initial assessment of your system you did at the workshop, either on your own or as a group activity?
3. Have you developed a System Management Improvement Plan, as discussed during the workshop, for taking actions based on your assessment?
 - a) If so, what have you done, what resources from Appendix III or other tools have you used?
 - b) As a result of your System Management Improvement Plan what additional actions do you anticipate taking over the next year?
 - c) If you haven't developed a Plan, when do you anticipate doing so?
4. Are there any additional observations you want to share about your activities since the workshop?

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FEEDBACK SESSION



Please complete your evaluation forms
Thank you!

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